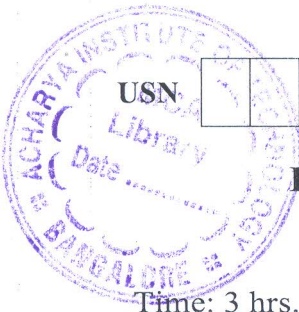


# CBCS SCHEME

18CS55



USN

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## Fifth Semester B.E. Degree Examination, Jan./Feb. 2023 Application Development using Python

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. List the salient features of python programming language. (04 Marks)
- b. Explain the math operators in python from highest to lowest precedence with an example for each. Show steps to evaluate  $(5 - 1) * (7 + 1) (3 - 1)$  in python. (08 Marks)
- c. Write a program to find the sum of all odd and even numbers of n elements. Here skip the numbers which are divisible by 3. (08 Marks)

OR

- 2 a. Give one example for each of the operation below in python language:
  - i) String concatenation and replication. (10 Marks)
  - ii) Read input and display. (10 Marks)
- b. Explain:
  - i) Def statements with parameters (10 Marks)
  - ii) Return values and return statements with an example. (10 Marks)

### Module-2

- 3 a. Discuss the different ways of traversing a list. Explain each with an example. (10 Marks)
- b. Write a python program that allows a player to guess a secret number within 6 chances. The code that lets the player enter a guess and checks that guess is right or not by printing appropriate message. List of numbers are taken as an input from the user. (07 Marks)
- c. Write a program to demonstrate the use of pretty function. (03 Marks)

OR

- 4 a. Compare list and dictionary data structures with respect to python language. (04 Marks)
- b. Write a program in python that counts. The number of occurrences of each letter in a string. Display the results in column fashion. (08 Marks)
- c. Write the string method syntax in python to perform below operations.
  - i) Removing white space characters from beginning, end or both sides of a string. (08 Marks)
  - ii) To right-justify, left-justify and center a string. (08 Marks)

### Module-3

- 5 a. List out the different character classes. Give representation, regular expression symbols, example and meanings for each character class. (10 Marks)
- b. Describe the following with suitable python code snippet:
  - i) Greedy and Non Greedy pattern matching. (10 Marks)
  - ii) Findall( ) method of RegeX object. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg,  $42+8=50$ , will be treated as malpractice.

OR

- 6 a. Write a python program to rename the filename contains American style dates (MM – DD – YYYY) to European style dates (DD – MM – YYYY) in the working directory. (10 Marks)
- b. What are Assertions in python? Explain with an example. (05 Marks)
- c. Explain the file reading and writing process with suitable python program. (05 Marks)

**Module-4**

- 7 a. How objects are mutable by nature justify with an example? (04 Marks)
- b. Discuss the methods `isinstance()` and `hasattr()` with suitable example for each. (06 Marks)
- c. What is operator over loading? Write a program to add two point objects by overloading + operator. Also, overload – str – () to display point as an ordered pair. (10 Marks)

OR

- 8 a. Define Inheritance. Explain with an example. (06 Marks)
- b. Briefly discuss the importance of - -init- -() and - - sti - () methods in python. (04 Marks)
- c. Demonstrate the polymorphism to generate histogram to count the number of times each letter appears in word and in sentence. (10 Marks)

**Module-5**

- 9 a. Analyze the steps involved in downloading and saving web page on to local system along with program. (06 Marks)
- b. List any 4 CSS selectors of bs4 module. Using Beautiful soup passel, retrieve all of the paragraph tags in the web page [www.amazon.com](http://www.amazon.com). (06 Marks)
- c. How selenium module is useful to deal with web pages. What methods do it uses to simulate mouse clicks and keyboard keys? (08 Marks)

OR

- 10 a. Write a program to read the census data from the excel spreadsheet, count the number of census tracts in each country, count the total population of each country and prints the results.

1	Census tract	State	County	POP2010
9841	06075010500	CA	SanFrancisco	2685
9842	06075010600	CA	SanFrancisco	3894
9843	06075010700	CA	SanFrancisco	5592

- (08 Marks)
- b. How to zip the files and folders. Demonstrate with one example. (04 Marks)
- c. Write a script that will go through every PDF in a folder and encrypt the PDFs using a password provided on the command line. Save each encrypted PDF with an-encrypted pdf suffix added to the original filename. (08 Marks)

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